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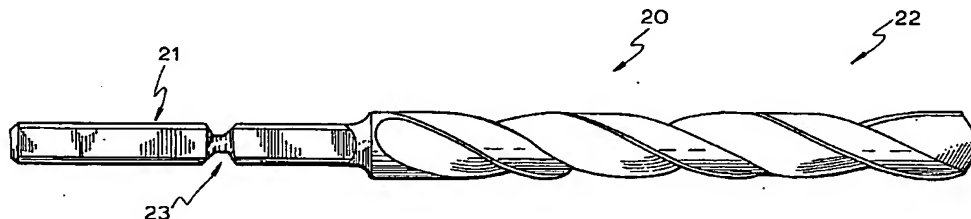
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METAL MACHINING AND DRILLING BITS

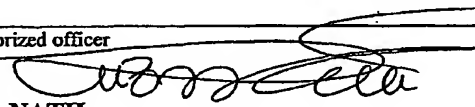


(57) Abstract: The drill (20) include a shear off safety feature. The flats (21) are connected to the bit (22) via a wasted section (23) so that upon jamming of the bit in a workpiece the wasted section will twist and shear off releasing the operator. The shank of the bit is made long enough that even if it is sheared there is still enough shank so that the bit may still be used to complete a drilling procedure if this be required. The shear torque is typically 15-30 ft lbs. Preferably 15-20 ft lbs for domestic drills and 20-30 ft lbs for industrial drills.

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# INTERNATIONAL SEARCH REPORT

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<b>A. CLASSIFICATION OF SUBJECT MATTER</b>		
Int. Cl. 7: B23B 51/00, B23B 27/00, B23D 77/00		
According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b>		
Minimum documentation searched (classification system followed by classification symbols)		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) DWPI: IPC B23B 51/-, B23B 27/-, B23D 77/- E21D 21/-+ Keywords (Drill, Shank, Safety, Break, Shear)		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 84/03461 A (SCOTT), 13 September 1984 Abstract, Figure 1	1-33
X	DD 203260A (SCHWOBODA), 19 October 1983 Figure, Abstract	1-33
X	DE 29700943U1 (SANTOWSKI), 13 March 1997 Figures, Abstract	1-33
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C <input checked="" type="checkbox"/> See patent family annex		
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Date of the actual completion of the international search 14 January 2004		Date of mailing of the international search report 20 JAN 2004
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustralia.gov.au Facsimile No. (02) 6285 3929		Authorized officer  G.B. NATH Telephone No : (02) 6283 2126

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	CH 686113 A (PRECIFAR SA), 15 January 1996 Figures	1-33
A	DE 20104257 U1 (MUELLER-WERKZEUG EK), 6 September 2001 Figures	1-33
A	DE 29812009U1 (FROEHLICH), 15 October 1998 Figures	1-33
A	WO 02/064295 A (MAXTECH MANUFACTURING INC.), 22 August 2002 Abstract	1-33

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/AU2003/001591

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member	
WO	8403461	AU	14717/83
		EP	0139636
DD	203260	NONE	
DE	29700943	NONE	
CH	686113	NONE	
DE	20104257	NONE	
DE	29812009	NONE	
WO	02064295	CA	2437568
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